

GIFT OF W R LOWELL

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INDIANA UNIVERSITY
DEPARTMENT OF GEOLOGY



NEWS LETTER No. 9

1960

INDIANA UNIVERSITY

DEPARTMENT OF GEOLOGY

NEWSLETTER NO. 9

Wm. D. Thornbury, Editor

Contributors

C. W. Beck

J. B. Droste

R. E. Esarey

D. E. Hattin

T. E. Hendrix

W. R. Lowell

Judson Mead

J. B. Patton

T. G. Perry

C. J. Vitaliano

Bloomington, Indiana

June 1960

MEMORIAL TO CHARLES FREDERICK DEISS

Charles Frederick Deiss, Chairman of the Department of Geology at Indiana University and State Geologist of Indiana, died on June 13 after a brief illness and complications following major surgery. His death is mourned by the faculty and staff of the Department and the Geological Survey, by the many persons who studied geology at Indiana University between 1945 and 1959, and by the numerous earlier alumni who came to know him during the years of his vigorous administration.

Doctor Deiss was born March 18, 1903, in Covington, Kentucky. He completed the A. B. degree in 1925 at Miami University and continued his geologic training through the degree Doctor of Philosophy at the University of Michigan in 1928. In 1929 he married Minnette Davison, who survives him.

From 1928 until 1945 Doctor Deiss was a faculty member at Montana State University. During these years his experience included work with the Montana Bureau of Mines and Geology, the Montana Power Company, and the United States Geological Survey. His extensive field work, mostly in the northern Rocky Mountains, was the basis for his distinguished reputation in trilobite paleontology, the stratigraphy of the Belt Series and the Cambrian System, Rocky Mountain structure, and the economic geology of dolomite and phosphate deposits.

To these diverse accomplishments, Doctor Deiss added proof of his ability as an administrator when he assumed his duties at Indiana University and with the Indiana Geological Survey. Here he expanded the program of the Department of Geology to include a wide range of specialties and established the Indiana University Geologic Field Station in the Tobacco Root Mountains of southwestern Montana. In the death of Charles Frederick Deiss the geological profession has lost one of its most vigorous and respected advocates and the Department of Geology and its alumni have lost an esteemed friend.

DEISS MEMORIAL FUND

The Charles Deiss Memorial Fund, established shortly after Doctor Deiss' death, will award two tuition scholarships for the Indiana University Geologic Field

Station for the summer of 1960. The recipients will be outstanding undergraduate geology students who will be enrolled in the summer field course in Montana. As the fund grows, other types of awards will be made. Contributions to the fund may be sent to Indiana University Foundation, marked "For Charles Deiss Memorial Fund."

NEW DEPARTMENTAL CHAIRMAN

Most of you are aware by now that Dr. John B. Patton has succeeded Doctor Deiss as Chairman of the Department of Geology and State Geologist. In view of the fact that your Newsletter editor acted as chairman of the committee appointed by Dean Frank T. Gucker to make a recommendation as to Doctor Deiss' successor, it is perhaps appropriate that a brief statement be made to our geoalumni regarding this selection.

The committee members and Dean Gucker wrote to forty or fifty prominent geologists for their suggestions as to men qualified for the dual position. As a result of these letters we compiled a list of nearly a hundred names for consideration. This list was reduced in size considerably when we took into account the fact that we needed a man with a background involving both academic and survey experience. The situation at Indiana University is unusual in this respect, for there are few places where the chairmanship of a geology department and the headship of a major state geological survey are vested in one man. A considerable number of persons thought that this was the proper time to separate the two jobs. However, certain circumstances led the university administrators to decide that this was not the most propitious time to attempt a renegotiation of the agreement with the Department of Conservation whereby the Chairman of the Department of Geology at Indiana University is also State Geologist and Head of the State Geological Survey. We were therefore instructed to search for a man who in our opinion could function in this dual role by proper delegation of authority.

After much discussion our original list of nearly a hundred names was reduced to twenty. A vita was prepared for each of these twenty persons and the list was submitted to the faculty members of the Geology Department and the heads of the various sections of the State Geological Survey for their consideration and

expression of opinions regarding the desirability of each man on the list. This procedure allowed us to reduce our list to a rather small number of names. After further deliberation the committee decided unanimously that John Patton most nearly met the requirements that we had set up. He has been connected with both the Department of Geology and the State Geological Survey since 1948; prior to returning to Indiana University as a faculty and survey member he had a lengthy period of industrial experience with a major oil company, the Magnolia Oil Company; he is Hoosier born and an Indiana University alumnus and thereby well acquainted with our particular educational and geological problems; and he has always shown a complete dedication to the cause of geology at Indiana University and throughout the State of Indiana. Many of the persons to whom we had written for advice had suggested that we had the most logical man for the job in our midst. The committee, therefore, recommended to Dean Gucker that John Patton be offered the position and Dean Gucker and other administrative officials readily agreed with our suggestion.

John's performance during the time that he was Acting Chairman and State Geologist and since he was given the permanent appointment seem to justify amply the confidence that has been placed in him. We feel confident that under his leadership the Department of Geology will continue its progress toward our goal of becoming one of the very best geology departments in the country.

SENIOR TEACHING STAFF

Carl Wellington Beck, Professor of Mineralogy
 John Brown Droste, Assistant Professor of Geology
 Ralph Emerson Esarey, Associate Professor of Geology
 Donald Edward Hattin, Assistant Professor of Geology
 Thomas Eugene Hendrix, Instructor in Geology
 Wayne Russell Lowell, Professor of Geology
 Judson Mead, Associate Professor of Geophysics
 John Barratt Patton, Chairman and Professor of Geology
 Thomas Gregory Perry, Associate Professor of Geology
 William David Thornbury, Professor of Geology

Charles Joseph Vitaliano, Professor of Geology

NON-ACADEMIC STAFF

Theodore H. Appleton, Accountant
 Bernice M. Banfill, Administrative Assistant
 Maynard E. Collier, Analytical Chemist
 Herbert P. Dutton, Caretaker, Geologic Field Station
 Ellen L. Freeman, Librarian
 M. Joan Justus, Secretary
 Charles S. Miller, Instrument Maker
 William H. Moran, Chief Draftsman
 Leonard Neal, Preparator
 Marguerite E. Trisler, Clerk Typist

TEACHING ASSISTANTS

George D. Brown, Whiting, Indiana, B. S., St. Joseph's College, 1953; M. S., University of Illinois, 1955. George has been assisting in the G100 - Geology and Man and G101 - Physical Geology laboratories under Mr. Hendrix' supervision. His doctoral thesis will involve study of Middle Ordovician bryozoans of central Kentucky.

Ronald D. DeRudder, Denver, Colorado, B. S., Indiana University, 1958. Ron is assisting Professor Beck in G301 - Mineralogy and G302 - Petrology. He is writing his A. M. thesis on the mineralogy of Pennsylvanian underclays, and will continue work here toward the Ph. D. degree with specialization in mineralogy.

Arch Girdley, Bedford, Indiana, B. S., Indiana University, 1958. Arch worked for Shell Oil Company in the gulf coast region before returning in February 1960 to pursue graduate studies. He is assisting Mr. Hendrix in G100 - Geology and Man laboratory. Arch will do a subsurface stratigraphic study under Professor Esarey for his A. M. thesis.

Barry T. Haff, Bronxville, New York, B. S., Trinity College, 1957. Barry is working toward the Ph. D. degree in paleontology. He plans a study of Hunton (Silurian-Devonian) bryozoa under the direction of Professor Perry. During the present year Barry has assisted in G100 - Geology and Man, G401 - Optical Mineralogy, G402 - Petrography, and G412 - Paleontology. Barry will assist this summer in course

G429 at the Field Station in Montana.

Craig Hatfield, Michigan City, Indiana, B. S., Indiana University, 1957. Craig assisted Mr. Hendrix in G100 - Geology and Man during the fall semester, and is assisting Professor Hattin in G102 - Historical Geology during the spring semester. For his thesis, Craig will pursue a stratigraphic-paleoecologic study of Lower Chester strata in Indiana, under the direction of Professor Hattin.

Gene W. Heien, Mt. Olive, Illinois, B. S., University of Illinois, 1959. Gene entered I. U. in February 1960 and has been assisting Mr. Hendrix in G100 - Geology and Man laboratory during the spring semester. Gene has not decided on a thesis project but will probably do his research in the mineralogy-geochemistry field under Professor Beck.

Robert L. Laney, Terre Haute, Indiana, B. S., Indiana State Teachers College, 1956. During the first semester Bob assisted Professor Thornbury in course G415 - Geomorphology, and is currently assisting in the G100 - Geology and Man and G101 - Physical Geology courses. Bob is working on the mineralogy and petrography of the Knox Dolomite (Cambro-Ordovician) of Indiana under the direction of Professors Patton and Droste. He will finish his work for the A. M. degree in June 1960 and then take a position with Texaco.

John Melton, Bloomington, Indiana, B. S., Virginia Polytechnic Institute, 1958. John assisted Professor Mead in the beginning geophysics course, G413, in the fall semester. He is electing the language option in lieu of writing a master's thesis.

Mark Reshkin, Newark, New Jersey, A. B., Rutgers University, 1955; A. M., Indiana University, 1958. Mark has assisted in the G100 - Geology and Man laboratory during the spring semester 1960. He plans to pursue a doctoral thesis in the field of glacial geology under the supervision of Professor Thornbury.

Benjamin H. Richard, Schwenksville, Pennsylvania, B. S., Virginia Polytechnic Institute, 1958. Ben is assisting Mr. Hendrix in G100 - Geology and Man. His A. M. thesis project involves the Tertiary history of a part of southwestern Montana and is being directed by Professor Lowell. Ben

plans to continue graduate work at I. U. toward his doctorate.

W. Thomas Straw, Griffin, Indiana, B. S. Indiana University, 1958; A. M., Indiana University, 1960. Tom assisted in G101 - Physical Geology and G102 - Historical Geology during the first semester. His thesis, completed under the direction of Professor Hattin, is entitled "Stratigraphy of the Marble Hill facies (Richmondian) of Indiana and Kentucky."

Daniel A. Wilson, New York, New York, A. B., Oberlin College, 1958. Dan has been assisting Mr. Hendrix in the laboratory for G100 - Geology and Man. His major field of interest is geophysics and he is currently conducting thesis research on Tertiary lake deposits in southwestern Montana under the direction of Professor Mead.

James H. Youngflesh, Richmond, Indiana, A. B., Earlham College, 1959. Jim has been assisting Mr. Hendrix in the G100 - Geology and Man and G101 - Physical Geology laboratories. He has not decided on a thesis problem but is interested mainly in stratigraphy and paleontology.

RESEARCH ASSISTANTS

Sambhudas Chaudhuri, Burdwan, India, B. Sc., University of Calcutta, 1956; M. Sc., University of Jadarpur, 1958. "Sam" has been assisting Professor Droste with laboratory analysis of clay minerals. Sam's thesis work will involve sedimentation and petrography of Paleozoic shales from Montana.

John H. Cleveland, Bloomington, Indiana, A. B., Indiana University, 1954. John will receive his master's degree from the University of Wisconsin when his thesis manuscript has been approved. His doctoral work at I. U. will deal with paragenesis of the magnesite deposit at Gabbs, Nevada and will be directed by Professor Vitaliano. John's current research is on the ignimbrites of Nevada.

John S. Parker, Logansport, Indiana, B. S., Indiana University, 1958. John is assisting Professor Mead with research on gravity and magnetic anomalies in Indiana. John's thesis project is concerned with thickness of Tertiary deposits in intermountain valleys of southwestern Montana. The work is being directed by Prof. Mead.

Ronald D. Perkins, Cincinnati, Ohio, B. S., University of Cincinnati, 1957; M. S., University of New Mexico, 1959. Ron has been engaged in the sedimentation lab doing laboratory analysis of clay and heavy minerals. His doctoral thesis will involve study of the petrography and paleoecology of the Devonian "reef" at the Falls of the Ohio and will be under the direction of Professor Droste. Ron plans to complete his Ph. D. studies by June 1962.

DEPARTMENTAL FELLOWS

Nityananda Bhattacharya, Banaras, India, B. S. C., M. S. C., Banaras Hindu University, 1949, 1951. "Bat" is now in his final semester and should receive the Ph. D. degree in June 1960. His thesis, work on which is presently nearing completion, has been directed by Professors Thornbury and Droste and is entitled "Weathering products of tills in Indiana." "Bat" will return to India this summer.

Richard D. Harvey, Evansville, Indiana, B. S., A. M., Indiana University, 1956, 1958. Dick is in his terminal semester of Ph. D. work and hopes to receive his degree in June. His doctoral thesis project concerns a study of hydrothermal alteration in the Goldfield district of Nevada. Dick will take a position in the Industrial Minerals Section of the Illinois Geological Survey following completion of his graduate studies.

INDUSTRIAL FELLOWS

Bernard R. Berry, Niagara Falls, New York, B. S., St. Lawrence University, 1959. Dick holds the Standard Oil of Texas Fellowship for the academic year 1959-1960. His primary interest is paleontology and his master's thesis will involve study of Pennsylvanian agglutinated foraminifera of Indiana under the direction of Professor Perry.

Walter J. Burfeind, Ghent, New York, B. S., Syracuse University, 1959. Walt's major interest is geophysics and he will engage in geophysical research for a master's thesis. The project is as yet undecided but will be under Professor Mead's direction. He holds the California Company Fellowship in Geophysics.

Alan A. Colville, Gary, Indiana, B. S.,

M. S., Indiana University, 1954, 1958. Alan holds the Shell Oil Company Fellowship in geophysics and is conducting research on the paleomagnetism of Paleozoic and Mesozoic rocks in southwestern Montana under the supervision of Professor Mead.

NATIONAL SCIENCE FOUNDATION FELLOW

John E. Utgaard, Minot, North Dakota, B. S., University of North Dakota, 1958. John will complete work for the A. M. degree in September 1960, and will continue graduate studies at I. U. in paleontology.

UNIVERSITY FELLOW

Alan R. Pratt, Arlington, Virginia, B. G., University of Tulsa, 1959. Alan has begun a thesis project on the geomorphic history of Beanblossom Valley under the direction of Professor Thornbury.

RECENT GRADUATES

B. S. Degree, June 1959

Birge, Jerry P.
 Boultinghouse, Marlan T.
 Cullers, Robert L.
 Hirschmann, Thomas S.
 Lankard, David R.
 Mathews, David L.
 Stallard, Marion D.
 Steinker, Don C.
 Wirth, Don W.
 Kirby, Robert N.

B. S. Degree, September 1959

Wampler, Fred R.

A. M. Degree, June 1959

Berendsen, David R.
 Language option.

Ogle, Ronald W.
A Study of the Effect of Temperature
and Pressure on Drill Hole Fluid
Resistivity.

Pee, Howard W.
Language option.

Pruett, Frank D.
A Study of the Magnetic Properties
of Some Residual Soils.

Riggs, Kenton N.
A Study of Spontaneous Potentials
Associated with Indiana Coals.

A. M. Degree, September 1959

Core, Eugene H.
Wall Rock Alteration in the Tonopah
Mining District, Nevada.

Phail, David H.
Language option.

Ph. D. Degree, June 1959

McCammon, Helen M.
Fauna of the Manitoba Group, from
Manitoba, Canada

Ph. D. Degree, September 1959

Greenberg, Seymour S.
Petrography of the Ste. Genevieve
Limestone in Indiana.

McCammon, Richard B.
Sedimentology and Origin of the
Alluvial Terraces Along the Wabash
River.

JOURNAL CLUB PROGRAMS

Professor Wayne R. Lowell served as
Chairman of the Journal Club Committee during
the academic year 1959-1960; Professor John
B. Droste was Vice-Chairman; and student
members included Richard J. Beckman,
President of S. G. E., Forrest Root, Faculty
Award Winner, and Alan Pratt, graduate
student.

The Journal Club program was revised
this year. Instead of bringing in many
outside speakers, each faculty member was
responsible for two Journal Club meetings,
and either he or one or more of his graduate
students prepared and delivered the

lectures. As in past years, six A. A. P. G.
Distinguished Lecturers were brought to the
campus. A few Journal Club meetings were
addressed by visiting geologists from
industry or foreign lands.

September 21

Dr. John B. Patton Introduction of
Department of Geology new faculty and
Indiana University graduate students

Dr. Wayne R. Lowell Kodaslices of
Department of Geology famous silver
Indiana University mining districts
in Mexico

September 28

Prof. John B. Droste "Weathering"
Department of Geology
Indiana University

October 5

Prof. John B. Droste "Weathering"

October 12

Prof. Judson Mead "Geophysics at
Department of Geology Indiana University"

October 19

Prof. Judson Mead "Geophysics at
Indiana University"

October 26

Mr. Thomas C. Hiestand "A Geologist
Distinguished Lecturer Discusses
A. A. P. G. Depletion"

November 9

Prof. Ralph E. Esarey "Leases and
Department of Geology Royalties in the
Indiana University Oil Industry"

November 16

Mrs. Gladys Hannaford "Diamonds"
New York, New York

November 23

Mr. Jack F. Conley "Greensburg Oil
Mr. John M. Heckard Field, Kentucky"
Department of Geology
Indiana University

December 3

Mr. Henry Carter Rea "The Geologist and
Distinguished Lecturer World Oil"
A. A. P. G.
(Speaker ill; Dr. Robert R. Shrock,
M. I. T. spoke)

December 7

Prof. Carl W. Beck "Meteorites"
Department of Geology
Indiana University

December 14

Prof. Wayne R. Lowell "The Yellowstone
Department of Geology Park Earthquake of
Indiana University August 17, 1959"

December 21

Prof. Carl W. Beck "History of American
Mineralogy"

January 4

Prof. Frank H. T. "Geology and
Rhodes Evolution"
University of Wales

January 11

Dr. Fred A. F. Berry "Trap Barriers -
Distinguished Lecturer Hydrodynamic, Strati-
A. A. P. G. graphic, and
Wetability"

February 3

Dr. Erling Dorf "The Earth's
Distinguished Lecturer Changing Climates"
A. A. P. G.

February 8

Mr. Craig Hatfield "A New Look at an
Mr. George Brown Old Journal"
Department of Geology
Indiana University

February 15

Mr. Michael Mound "Foraminifera as
Department of Geology Ecologic
Indiana University Indicators"

February 22

Prof. C. J. Vitaliano "Reminiscences --
Department of Geology Geologic Maps and
Indiana University Mapping"

February 29

Prof. C. J. Vitaliano "Rhyolites -- What
Mr. Richard Harvey are they? Tertiary
Department of Geology Geology of Gold-
Indiana University field, Nevada"

March 7

Prof. George Kuriyan "The Physical
Visiting Professor Geography of
of Geography India"
Indiana University

March 14

Dr. Stevenson Buchan "Fundamental
Visiting Scientist Contributions of
A. G. I. Geology to the
Proper Development
of Groundwater
Resources"

March 21

Prof. Donald E. Hattin "Glimpses of
Department of Geology Regional Strati-
Indiana University graphy Field Trips"

March 28

Ronald Perkins "Petrography of
Some Pennsylvanian
Limestones from
Northern New
Mexico"

Steven Cohen "Some Problems in
Preparation of
Isopachous Maps"

Craig Hatfield "The Use of Acetate
James Youngflesh Peels in Carbonate
Department of Geology Petrography"
Indiana University

April 4

Dr. Robt. M. Kleinpell "Principles of
Distinguished Lecturer Biostratigraphy"
A. A. P. G.

April 11

Dr. D. S. Coombs "Some Aspects of
University of Otago New Zealand Geology"
New Zealand

April 25

Alan Pratt "Recent Theories to
Department of Geology Account for Conti-
Indiana University nental Glaciation"

May 2

Prof. T. E. Hendrix "Geology of the
Department of Geology Lake Superior Region"
Indiana University

May 9

Mr. Alan C. Colville "The Interpretation
Department of Geology of the Remnant
Indiana University Magnetism of Some
Rocks From South-
western Montana"

May 10

Mr. J. Ben Carsey "Geology and Oil
Distinguished Lecturer Development in
A. A. P. G. Alaska"

May 16

Dr. Melvin Rosenfeld "Estimation and
Pure Oil Company Expression of Error
in Experimental
Analysis"

The faculty included Professors Judson Mead, Wayne R. Lowell, and Charles J. Vitaliano from Indiana University; Professor Raymond C. Gutschick from the University of Notre Dame; Professor Robert M. Weidman from Montana State University; and Professor Richard Lounsbury from Purdue University. Miss Phyllis Scudder, Youngstown University, collected rock specimens from all of the sedimentary and igneous formations to build up a rock teaching collection.

The summer program was quite successful and unmarred by serious accidents or illness. Sunny weather characterized both the Glacier Park and Dillon trips. Several visitors stopped over at the Station; among these was Mr. Donald H. Clark of the Indiana University Treasurer's Office. Mrs. Hazel McComb continued to cook and serve excellent food.

During the summer of 1959 the Geology Department completed construction of five new permanent buildings on the Field Station Campus in Montana. The buildings include a large steel dormitory-library combination, a steel bath house and laundry building, two steel faculty cabins, and a frame garage for the use of the caretaker. All of these facilities are located on the upper campus near the lodge. The buildings will provide added facilities urgently needed as a result of an expanding program on both the undergraduate and graduate level at the Field Station. It is hoped that before too long the library will contain a good collection of geologic literature pertinent to problems of southwestern Montana. Enrollment in the undergraduate Field Geology course for 1960 is expected to hit a new high for recent years. Enrollment is being limited to approximately 50 students and it may be necessary to turn down some late applicants.

GEOLOGIC FIELD STATION

The summer geology course G429 - Field Geology in the Rocky Mountains was held from June 12 to August 5, 1959. Thirty-five students were enrolled in the course. There were sixteen students from Indiana University, nine from Montana State University, and ten from other universities and colleges. In addition, there were four graduate students working on field problems for Master's and Ph. D. theses. Benjamin Richard did areal mapping on the Tertiary sedimentary rocks; Alan Colville, John Parker, and Daniel Wilson worked on geophysics problems which involved paleomagnetism, seismic measurements, and gravity measurements.

SUMMER SCHOLARSHIPS

A program of summer scholarships for the Field Station has been inaugurated for the coming season in order to attract the highest quality students possible. Several \$200.00 scholarships are being offered to top-notch applicants to help defray the cost of their summer training. It is hoped that this program can be continued through future summers but to do so financial help will be urgently needed.

The graduate program at the Field Station is still expanding. Four graduate students participated in the research program during the summer of 1959 and it is

expected that there will be six to eight for the 1960 field season. Research programs in paleomagnetism, gravity, seismic measurements, and geologic mapping are under way. The thin section laboratory and geophysics laboratories have been in full swing for two seasons and new equipment will be added for the coming season.

NATIONAL SCIENCE FOUNDATION INSTITUTE IN FIELD GEOLOGY FOR COLLEGE TEACHERS

The department received a grant from the National Science Foundation to conduct a six-week Institute in Field Geology for College Teachers during June and July of 1960. Thirty qualified college and university geology teachers have been selected to participate in the Institute and they will converge on the Field Station on June 16 to start their six weeks stay. The academic program of the Summer Institute is under the direction of Professor Raymond C. Gutschick, Head of the Department of Geology, at University of Notre Dame. Ray is no stranger to the Field Station and the department is fortunate to have his services in this capacity. The Institute will bring many well known geologists to the Field Station for short periods. Among these will be Professor Christina Balk, New Mexico Institute of Mining and Technology; Professor Harry E. Wheeler, University of Washington; Professor Adolf Knopf, retired, Stanford University; Professors Fred Honkala and Robert Weidman, Montana State University; and Professor William D. Thornbury, Indiana University. Several members of the U. S. Geological Survey also will help in the teaching program. These will include Edwin D. McKee, G. D. Robinson, Dr. Montis R. Klepper, Clyde P. Ross, and Irving J. Witkind.

GEOLOGY IN EXTENSION CENTER

For the first time in its history the Geology Department at I. U. is offering the introductory course at an off-campus center. Fourteen energetic students under the guidance of Mr. Hendrix are presently investigating the mysteries of G101 - Physical Geology at the Indianapolis Extension Center.

Any deficiencies in the caliber of the course which have resulted from an almost total lack of equipment and supplies at the Indianapolis Center have been more than offset by the high degree of interest shown by the students.

Next fall we hope to turn the course over to a graduate student, George Brown. It is rumored that George has decided to enter the Indianapolis 500 mile race this May to prepare himself for the bi-weekly drives to Indianapolis.

SIGMA GAMMA EPSILON

The fall of 1959 found Rho Chapter being led by four new officers. They were Richard Beckman, President; David Mathews, Vice President; Bob Laney, Secretary-Treasurer; and John Utgaard, Corresponding Secretary Editor. The first meeting got under way with plans for a "mixer." It was held as general get-together of all faculty members and students new and old, and was a very successful fish fry and beer party.

Formal initiation of eight new members, in November, in one of the many nearby caves was followed by a banquet in their honor.

Besides the bi-weekly coffee hour sponsored by Rho, several evening coffee hours were held following talks by guest lecturers which enabled students and faculty to meet informally with the speakers.

The annual Christmas party was held on December 17 in the Indiana Union Building. It was well attended and the skit lampooning the faculty was highly enjoyed, as well as Santa Claus' presentation of candy to the children.

Dave Mathews, our Vice President, received his A. M. degree in January, so a special election was held and Jack Conley was elected to succeed him.

In February, the chapter held a party called the "Rustic Romp" in a log cabin outside of town. It was attended by members and their wives and dates. An enjoyable evening of dancing and conversation was topped off by singing folk songs.

Nine new members were initiated on April 1. This brought our total membership to 37.

Plans are being made for the annual spring picnic for the faculty, students and their families. Softball and volley ball will be played and the day will end with a "cook out."

Rho Chapter has maintained a geological display case throughout the year and has changed the theme each month.

It has been decided by the chapter that a memorial fund be established in honor of the late Dr. Charles F. Deiss, who was head of the Geology Department from 1945 until his death in June 1959.

Rho Chapter plans to send a delegate to the 20th Biennial convention in Houston, Texas.

GEOLOGY DEPARTMENT LIBRARY

The Geology Library's exchange expansion program, begun last year, has added to the serial holdings the publications of the academies of science, geological institutes, and official geological surveys and mines bureaus of all parts of the world. Among the countries newly represented on the library's periodical shelves are Belgium, Egypt, Estonia, Greece, and Nigeria.

Another current project in the library is the development of the map collection through the completion of formerly partial map sets and the purchase of significant individual maps.

The library has grown statistically as well as qualitatively. The addition of about 3500 maps has increased the map collection to approximately 35,000. The more than 700 books and bound periodicals acquired during the year bring the total cataloged collection to more than 23,000 volumes. The greater use made of the library during the past year has been reflected in month by month increases in statistics of circulation and room use of library materials.

The current development of instruction in the earth sciences in high schools has been reflected by the visits of students, singly and in groups, from the high schools of Monroe and Brown Counties. The library has continued to welcome classes from Indiana University's Division of Library Sciences.

VISITING A. G. I. SCIENTIST

Dr. Stevenson Buchan, Chief Geologist of the Water Division of the Geological Survey of Great Britain, was a guest lecturer at the Department of Geology from March 14 to 18. Doctor Buchan's visit was made possible by the Visiting International Scientist Program of the American Geological Institute. During his stay at Indiana University, Doctor Buchan gave a series of five lectures, all concerned with one aspect or another of groundwater. In addition, Doctor Buchan visited the U. S. Geological

Survey Water Supply Office in Indianapolis, and took the opportunity to see some Indiana geology.

STATUS OF NEW GEOLOGY BUILDING

The estimated completion date for the new Geology Building is July 1962, and occupancy should be complete by September 1962 in time to hold classes during the fall semester, 1962-63. At present the foundation is completed and contracts have been let for steel and for the remainder of the building. The erection of the steel is anticipated to begin in July 1960 and to be completed by September 1960. Following this phase, the remainder of the construction will begin.

On January 1, 1960, R. K. Leininger was appointed by the Geology Faculty to serve as Coordinator for the Geology Building. His duties have included the collection of information on the present equipment to be moved, the equipment to be refinished and moved, and the requirements for new equipment. In addition, Dick currently is involved in "debugging" the architect's plans; that is, he is checking that all utility outlets not only are provided but also are in the proper places.

The Geology Building Committee has prepared and revised a request to the National Science Foundation to support the cost for standard fixed equipment in certain research laboratories.

One of the problems facing the Building Committee now is the necessity to change the building plans to accommodate the increasing enrollment in the freshman courses (see below). A sufficient number of freshman laboratories were planned originally but were curtailed when funds were frozen. The committee is trying to put the laboratory space back into the plans without cutting into other space.

One teaching facility is completed to date; namely, a 960-foot drill hole to be used as a geophysical teaching aid.

ENROLLMENT IN "GEOLOGY AND MAN"

The "population explosion" concept of the political geographers and sociologists was brought forcibly home to the members of the Geology Department this past year when enrollment in the Geology and Man course jumped from 80 to 380. This "explosion" caught us unprepared and forced a scramble for space, assistants, and equipment to

handle the horde.

Despite the confusion that accompanies an enrollment increase of this magnitude, we all feel that the advantages of this increase to the department far outweigh any temporary inconvenience that it may have caused. Many undergraduates, previously unaware that Indiana University had a Geology Department, are now seriously considering adding a course from this department to their schedule. Of more immediate benefit has been the increase in the number of graduate students we can now support as graduate teaching assistants.

VITAL STATISTICS

Births

Mr. & Mrs. Bruce Bohor - their third daughter, Lauri Lynn, February 23, 1960.

Mr. & Mrs. Richard Bowen - a daughter, Cynthia Eve, July 15, 1959.

Mr. & Mrs. Malcolm Boyce - a son, Alan Leland, November 24, 1959.

Mr. & Mrs. Robert Boyer - a daughter, Janice Emily, December 4, 1959.

Mr. & Mrs. Donald Burditt - a daughter, Karen Ellen, August 21, 1959.

Mr. & Mrs. John Davenport - their sixth son, January, 1960. (Name of son not known.)

Mr. & Mrs. Wayne Fowler - their third son, David Earl, August 19, 1959.

Mr. & Mrs. J. R. Harris - their fourth son, Clayton D. (Date not known)

Mr. & Mrs. Robert Hite - a son, Robert D., Jr. October 20, 1959.

Mr. & Mrs. Perry Holloway - a son, Ray Evan, July 20, 1959.

Mr. & Mrs. Thomas Jones - a daughter, Amy Christine, March 20, 1959.

Mr. & Mrs. Ronald Ogle - a daughter, Debra Lynn, July 16, 1959.

Mr. & Mrs. Victor Olson, Jr. - their third daughter, Lisa Marie, January 15, 1960.

Mr. & Mrs. Howard Pee - a daughter, Dana Kathryn, January 1, 1960.

Mr. & Mrs. Samuel Riely - a son, Michael H., October 13, 1959.

Mr. & Mrs. Kenton Riggs - their first daughter, Jennifer Anne, January 8, 1960.

Mr. & Mrs. Gerald Rupert - a son, Bradley Allen, November 10, 1959.

Mr. & Mrs. Willis L. Smith - a daughter, Karen Diane, April 27, 1959.

Mr. & Mrs. David Von Tress - their first child and daughter, Susan Elizabeth, November 2, 1959.

Mr. & Mrs. Robert Voss - their third son, William Clark, July 1, 1959.

Mr. & Mrs. Wes Williams - a daughter, Tammy Anne, March 9, 1959.

Mr. & Mrs. George Yurkas - a son, Michael Dean, September 6, 1959.

Deaths

Carl Vincent Barker - June 1959

Marshall Harrell - July 1959

Frederick Schweers - September 1959

Essie Smith - June 1959

NEWS ITEMS

Robert D. Hite is doing reservoir development analysis for the Phillips Petroleum Co. in Bartlesville, Oklahoma.

George Yurkas continues as production geologist for the Gulf Oil Company in Crane, Texas.

Perry Holloway is still enjoying life and a prosperous independent oil and gas business in Shreveport, Louisiana.

Howard Pee likes his work as palynologist for the Shell Oil Company in Baton Rouge, La. He finds that it costs more to live there than in Bloomington, Indiana.

John Davenport is Assistant Professor of Air Science with the AF ROTC at Wichita, Kansas, and invites any one passing through Wichita to look him up.

Willis Smith is now stationed at Edwards Air Force Base, California.

David E. Von Tress is still helping Texaco hunt for oil around Corpus Christi, Texas.

Wayne E. Fowler is in charge of a geophysical crew working the swamp and marshland of southeast Louisiana.

Samuel L. Riely has moved from Abilene, Texas, to Hobbs, New Mexico, and is working as a production geologist in his new location. He, too, would like to see any of his old friends.

Robert Voss seems to be on the verge of completely forsaking geology. He has recently completed his work for the LL.B. degree and expects to take the Indiana bar examination this spring.

Richard L. Bowen received his Ph.D. degree in February "in absentia" from the University of Melbourne. He completed work for his degree while there on a Fulbright Scholarship. He is at present working for the Gulf Oil Company on the Congo River, in Portuguese West Africa.

Dan Rodriguez writes that he has been in the Air Force since graduation. He is now married and is stationed at Dow AFB, Bangor, Maine, where he flies B-52's.

Donald W. Wirth is with the U. S. Gypsum Company in Cincinnati, Ohio. Although not employed as a geologist he finds his knowledge of geology useful in his work.

Marshall Newnun will complete this year his 30th year of teaching in Pontiac Township High School, Pontiac, Illinois. He expects to retire after one more year.

Frank H. Williams is manager of Larsen-Logue Electric Company in Lynwood, California.

Marlan Boultinghouse is employed in Terre Haute, Indiana, by Anaconda Aluminum Company as a Management trainee. He was married last June to Ann Schlichte of Connersville, Indiana.

R. M. Newman is still exploration geologist with Mobil Oil Company in Houston, Texas.

Alan J. Rommel is now working for MEDICO with Dr. Tom Daly in Laos. He expects to be back in the United States by Christmas.

Bert Hale has transferred from Bakersfield to La Habra, California, and with the change has come a shift from geophysical work to geological work.

Keith Treadway is still studying law along with his geological work in Oklahoma City. He has completed half of the requirements for the LL.B. degree at Oklahoma City

University.

Steve Theodosis gave a paper on the structure of the Melrose, Montana area at the meeting of the Rocky Mountain section of the Geological Society of America in Missoula, Montana, last May.

Caroline H. Kierstead reports the death of her husband last September. She is continuing her teaching at Smith College.

George Whitlach is in his second year at Georgia Tech, where he is in charge of the Engineering Experiment Station's Community Development Section. His work has to do largely with industrial site studies.

Donald Roermann is now connected with a stock brokerage house in New York, but has not completely lost his contact with geology as he specializes in oil company stocks. (We hope they are good ones!)

"Red" Foley has returned to I. U. for further work in geology.

Marion Stallard is connected with the McKenzie Oil Company in Evansville, Indiana.

Olin Holt is logging engineer for the Birdwell Division of Seismograph Service Corporation at Fairfield, Illinois.

Dave Mathews completed work for his master's degree in February and left immediately for Jackson, Mississippi, where he is employed by Texaco.

Lawrence Rooney decided that the life of a college professor did not appeal to him after a year of it at the University of Texas, and is now working for Humble Oil and Refining Company, Carter Division, in Mattoon, Illinois. Buddie is now specializing in housekeeping.

Gordon Grender left in April for Oslo, Norway, where he will spend a year on a NATO postdoctoral fellowship.

Don Hyer has been moving around considerably during the past year. He was first transferred from Lafayette, Louisiana, to New Orleans and then, in September, to Houston, Texas. He still retains, however, his connection with Texaco.

Harold Sorgenfrei is working in Texaco's division office in New Orleans.

George Bechner was promoted last June to District Geologist for the Carter Division of Humble Oil Company. He is located in Riverton, Wyoming.

Don Six has been transferred to Bakersfield, California, where he is now District Geologist.

Jacob P. Hamilton is with the National Park Service and is stationed on the Natchez Trace Parkway. He recently completed a three month's training program at Yosemite Park.

Eula McEwan is still enjoying her retirement in Lincoln, Nebraska.

Marvin Warner is working for Shell Oil Company in Durango, Colorado.

Jim Powell is employed as geologist with Hooker Chemical Company in Columbia, Tenn.

Jack Pickering expects to obtain his Ph. D. degree from Stanford University this coming September. His thesis problem deals with the geochemistry of laterites.

Preston McGrain served as Chairman, Field Trip Committee, Southeastern Section, Geological Society of America, for the meeting held in March at Lexington, Kentucky.

After spending 24 months in the Libyan Desert in the employment of the United Geophysical Corporation, Howard Clark has returned to Indiana and purchased a home with forty acres of timber north of Spencer, Indiana. He is now hoping that he can find some one who needs the services of a geologist within a convenient radius of Spencer.

Wallie Aiken, after spending three months of training at the California Research Corporation center in La Habra, California, is in New Orleans working for the Chevron Oil Company.

Elmer Lucas writes from Norman, Oklahoma, that he has been busy during the past year helping administer an NSF program designed to improve science teaching in high schools. He will return this summer to Penn State as a visiting professor.

Tom Heistand reports that his tour of duty as a Distinguished A.A.P.G. Lecturer was most enjoyable and he found the response to his lectures most gratifying. He looks forward to seeing a lot of I. U. alumni in Denver in 1960 and 1961 at the G.S.A. and A.A.P.G. meetings.

Walter Burnham feels that the graduates of the past decade or two ought to visit our campus and become familiar with the changes that have taken place since they left.

Ralph Hunter expects to complete work for his Ph.D. degree at John Hopkins during the coming summer. His thesis is upon the Clinton iron ores.

John R. Reeves is president of the Natural Gas and Petroleum Association of Canada.

Walter Dahmer is still working for Pan-American in Denver. The Dahmers are enjoying the pleasures of a recently adopted baby daughter.

Harold L. ("Diz") Deane has accepted a position as Development and Reservoir Engineer for Standard of California at Taft, California.

John A. Dunn has transferred from Vernal, Utah to Shreveport, Louisiana.

Bill Kaschube is still located at Robinson, Illinois, with Bell Brothers, but his work takes him into Kansas and Michigan.

Wyman Harrison has left the Glacial Geology Section of the Indiana Geological Survey to accept a position on the staff of the Geology Department of Dartmouth College. His place has been taken by Allan F. Schneider, a University of Minnesota graduate.

Al Miesch has completed his doctoral work at Northwestern University and is back with the U. S. Geological Survey at Denver, Colorado.

Wes Peirce is still at Tuscon, Arizona, and reports that he has had two visits there with a well-remembered former member of our faculty, Brian Mason.

E. P. Hunt reports a visit to Bolivia, Peru, and Ecuador during the past year. He did not say whether he was hunting oil, gold, shrunken heads, or recreation.

Raymond Parker, who is based with the U. S. Geological Survey in Denver, is now working on the geology of the Bitterroot Range of southwestern Montana.

Addison King is vice-president and general manager of High Lime Rock Company, Inc. of Miami, Florida. He writes that he is barging a lot of limerock along the intra-coastal waterway from Miami to Cape Canaveral.

Wm. A. Thomas continues his work as Division Geologist of the Ohio Oil Company at Houston, Texas.

John Kerr Rose writes that at last he has a child enrolled at Indiana University, but unfortunately she seems to be headed for a nurse's career rather than that of a geologist. If she will only take some courses in geology she may well end up as a nurse-wife to some fine young geologist.

Frank Kottowski still is enjoying his geologic work in the "Land of Enchantment". (New Mexico, that is, to you who have not experienced its enchantment.) The Biebertmans are still a part of the Socorro, New Mexico colony.

Paul Simpson continues his association with the postal service but has been transferred to the Broad Ripple, Indiana, office. Even though he is no longer connected with geology, he says he is always glad to get the Newsletter and learn what is going on.

George Winston continues his work around Billings, Montana, for the Humble Oil Company.

Dan Tudor writes that he, Malcolm Boyce, and Frank Pruett constitute an I. U. Alumni Association that meets regularly in Midland, Texas.

Roger Battin has been promoted to associate professor in the Department of Geology at the University of Wisconsin.

David Phail is working for the Bear Creek Mining Company in Aurora, Minnesota. Says he is learning a lot about Precambrian geology and subzero temperatures.

John Organ plans to spend the year 1960-61 in Europe. He recently became a grandfather.

Glenn Bartle expects to get a break from his duties as president of Harpur College while he and Mrs. Bartle attend the International Geological Congress in Copenhagen during the coming summer.

John Rex Taylor is still in the trucking and warehousing business in Cincinnati, Ohio. He is active in the I. U. Alumni Club there and trying to attract good athletes to I. U.

Carl W. Meyers is flying the new KC-135 jet tankers at Bunker Hill, Indiana, Air Force Base.

Robert R. Shrock served as president of the National Association of Geology Teachers during the past year. Much of his attention is now going into plans for a new Earth Science building at M.I.T. Bob visited the campus during the first semester and very graciously filled in for one of the A.A.P.G.

Distinguished Lecturers who at the last moment was unable to fulfill his appointment.

Friends of Dr. E. R. Cumings will be glad to learn that he is recovering satisfactorily from an operation for hemorrhoids. His address is Apt. 423, Alban Towers, 3700 Massachusetts Ave., N.W., Washington, D. C. He would enjoy hearing from all of his former students.

John N. Mitchell reports that he is completing his 31st year of public school teaching in Indiana and Kentucky. At present he is teaching in Southern High School, Jefferson County, Kentucky.

Don G. Barnett retired, as of March 1, 1960. He will continue to live in Shreveport, Louisiana.

Hugh H. Berry is now acting as a consultant on lubricants for the U. S. Naval Aeronics, in Indianapolis, Indiana.

James Smith reports from California that he is still enjoying its "fabulous weather" and his work on solid and liquid rocket engines for Rocketdyne.

N. A. Parker enjoyed a business trip to Europe last fall in company with Dr. Erich Sarapun, President of Electrofac Corporation, Kansas City, Missouri.

Brice B. Smith is head of the Mathematics and Physics Departments of Monmouth High School, Adams County, Indiana.

John H. Hughes is still doing consulting work in Billings, Montana.

Paul D. Proctor spent last summer examining and collecting from some 60 intrusive bodies in the western United States. He recently published the results of an industry-earth science evaluation of geological curricula.

Noble Beard writes that a family group enjoyed a Christmas holiday trip to Death Valley and environs. They particularly enjoyed their inspection of the sliding stones of Racetrack Playa.

Many of you will remember Dr. Allan F. Wilson, who was Visiting Professor of Petrology in 1955, while in the United States as a Fulbright Lecturer. Word has been received of his appointment as Professor of Geology and Mineralogy at Queensland University.

The appointment of Maurice E. Biggs to the newly established position of Assistant

State Geologist was announced in March. Maurie has served as Head of the Geophysics Section of the Indiana Geological Survey since its beginning in 1951 and will continue to direct the activities of this section.

Two recent visitors to the campus were Maurice McClain and Bill Moll. Maurie was on a short vacation and Bill had come back to the campus for the performance of PARSIFAL by the School of Music.

Pei-yuan Chen reports that he is very happy in his teaching position at the University of Taiwan. He spent last summer prospecting for iron ore in the mountainous area of eastern Taiwan. The Chens also announce the birth of a son on February 16.

Leonard Katanich writes from Paramaribo, Surinam, S. A., that he is testing materials for the Paramam-Affobakka road. He and his family expect to return to the United States in June.

Ronald K. Ogle, after working for the past seven months on one of Mobil's water seismograph crews, is now in the Houston office of that company continuing his training in seismograph operation and interpretation.

Thomas D. Jones for the past two years has been working on a regional stratigraphic study of the lower Cretaceous and Jurassic of the Gulf Coast area.

F. H. Latimer is still located at Evansville, Indiana, where he is in charge of the Eastern Division of Sun Oil Company.

Joe Whaley finally found "that girl" and took the marriage vows in November. He continues his work in the Geophysics Section of the Indiana Geological Survey.

Ed McKay has dissolved his partnership and is now operating on his own as a consulting geologist in Robinson, Illinois.

Neil Schemehorn reports from New Orleans that Jack Wells and family paid him a visit on their way to Venezuela.

John R. Harris writes from Casper, Wyoming, that he has gone in for silver-smithing and lapidary work. Sounds like he has lost that thirst for oil. He also reports that our caravan of students going to summer camp passed him on the road one day but he was unable to flag them down. (This only shows that our students are anxious to get to camp and get started on their mapping projects.)

As of April 1, Karl Frielinghausen has been doing consulting geology. He is hoping to see a large number of I. U. graduates at the A.A.P.G. meeting in Denver in 1961.

Jim Koenig will probably be out of the U. S. Navy by the time he receives the Newsletter. He will start work with the California Bureau of Mines as of July 1.

Don Steinker is working on a master's degree in paleontology at the University of Kansas.

H. H. Bradfield paid the campus a visit last summer. He looks forward to a trip to Europe this summer to take in, among other things, the International Geological Congress.

Dallas Fiantdt reports from New Orleans that he, Gene Taylor, Dennis Lucas, and Bud Sorgenfrei and families got together and talked over old times.

Friends of Dr. Ross Taylor will be interested to learn of his marriage last May to Noël White of Perth, Western Australia. The marriage took place in Oxford, England.

John Utgaard, a National Science Foundation Fellow and Ph. D. candidate, presented a paper dealing with the Glen Dean (Mississippian) fenestrate bryozoans at the Lexington meeting of the Southeastern Section of the Geological Society of America.

Henry G. Rogers is now Geographic Attache for the American Embassy in Paris, France.

Bob Sargent is still with American Metal Climac in New York. He reports purchase of a new home in Suffern, New York.

Professor Wayne Lowell attended the meetings of the Rocky Mountain section of A.A.P.G. in Billings, Montana, in February 1960. An Indiana University Luncheon was held at the Northern Hotel on February 10, at which the following were present: Wayne Lowell, Tom Heistand, Bill Flanagan, Bob Baxter, George Nevers, Ralph McDonald, Kennie Vance, John Hare, Clay Warren, and Harry Kugler.

While visiting the campus, Professor D. S. Coombs of Otago University, Dunedin, New Zealand, in addition to addressing Journal Club, gave a talk before a more select group upon the low rank metamorphism of clastic sedimentary rocks in New Zealand.

Tom Dawson, Head of the Petroleum Section of the Indiana Geological Survey, is

slowly resuming his professional duties following a severe heart attack.

Joaquin Rodriguez, now on the faculty of Hunter College, gave a paper at the annual meeting of the Geological Society of America concerning the Golconda (Mississippian) fauna of Indiana, western Kentucky, and southern Illinois.

Dr. J. J. Galloway took time out from the vigorous pursuit of his stromatoporoid studies to win, with the aid of a suitable handicap, the annual pool tournament of the Men's Faculty Club.

In the late spring of 1959, the faculty softball team (reinforced by a couple of graduate students) trounced a team composed entirely of students. Thus far this spring the students have not issued their annual challenge to the faculty after their crushing defeat last year.

Hobart B. Harris, geologist with the U. S. Groundwater Survey, visits the campus occasionally. He is stationed at Sheffield, Alabama. Mrs. Harris is a former Bloomington girl.

James A. Noel, who obtained his Ph. D. degree in 1957 and is currently geologist with the Creole Petroleum Company in Maracaibo, Venezuela, has accepted the position of Head of the Geology Department of Northwestern State College at Natchitoches, Louisiana. Jim expects to assume his new position in the fall.

Frank Pruett, who works for Standard of Texas in Midland, Texas, paid the department a short visit in December.

Sixteen persons attended the Alumni Luncheon held in Haddon Hall, Atlantic City, New Jersey, April 26, 1960, during the meeting of A.A.P.G. Present were John W. Huddle, Caroline Heminway Kierstead, Mr. & Mrs. Ralph Esarey, H. H. Bradfield, Mr. & Mrs. Glen Bartle, James W. Batchelor, Arthur P. Pinsak, Jack W. Wells, Gary R. Gates, Gerald Carpenter, Gene Taylor, John B. Droste, Tom Heistand, and John B. Patton.

Gene Core writes from the Black Forest area in Germany that in typical army fashion he is putting his geological talents to use as a radio officer with the added duties of mess officer. He hopes to be back to civilian status within a year.

Richard Fitch, who has been located at the Grants, New Mexico mine of the Lance Corporation, has been transferred to the Santa Fe office of the same company.

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